

- I. Claims 1-10 [new claims 64 to 102], drawn to a method of obtaining a biological factor from cells below the stratum corneum of the skin of a subject.
- II. Claims 11-27, drawn to a method of distinguishing ICD from ACD in a subject by quantifying a polynucleotide level encoding a cytokine.
- III. Claims 28-34, drawn to a method of diagnosing ICD in a subject by quantifying the levels of a cytokine namely IL-4 and IL-8, in cells isolated from a subject.
- IV. Claims 35-41, drawn to a method of diagnosing ACD in a subject by quantifying the levels a polynucleotide encoding IL-4 in cells of a subject.
- V. Claims 54-60, drawn to a method of diagnosing ACD in a subject by quantifying a polynucleotide encoding IL-13 in cells of a subject.
- VI. Claims 61-63, drawn to kits comprising of a cell collection device, reagents for preserving polynucleotides, and mRNA detection reagents.
- VII. Claims 42-53, drawn to a method of identifying a compound that causes a dermatitis upon contact with skin by detecting a polynucleotide encoding a cytokine.

#### **The Election**

In response to the Restriction Requirement, Applicants elect Group I.

#### **Support for the Claim Amendments**

The specification sets forth an extensive description of the invention in the new and amended claims. Support for claims directed to a method for obtaining a biological factor (e.g., a nucleic acid, such as DNA or RNA) from a skin cell of a subject, the method comprising removing an outer skin layer by scraping or stripping to expose an inner skin cell surface; and extracting the biological factor from the exposed cell surface, is found, *inter alia*, at page 6, lines 13 to 29; page 7, lines 16 to 27. Support for methods wherein removal of the outer skin layer removes the stratum corneum using a procedure by abrading the stratum corneum or contacting the stratum corneum with an adhesive surface, is found, *inter alia*, at page 7, lines 16 to 27. Support for claims directed to methods for isolating and detecting the presence of at least one biological factor (e.g., a nucleic acid, such as DNA or RNA) in a skin sample (e.g., an outer skin layer or a stratum corneum skin sample) comprising isolating a skin sample and detecting the presence of the biological factor in the skin sample, is found, *inter alia*, at page 4, lines 1 to 4; page 6, lines 13 to 15 and page 6, line 30 to page 7, line 27; page 10, lines 1 to 26 (see new claim

64). Support for claims directed to methods wherein the skin sample is obtained by at least one application of an adhesive surface to an outer layer of the skin, is found, *inter alia*, at page 3, lines 11 to 12; page 7, lines 22 to 28; page 18, lines 1 to 11. Support for claims directed to methods wherein the adhesive surface is applied at least one time to the skin sample, is found, *inter alia*, at page 7, lines 24 to 28. Support for claims directed to methods wherein the adhesive surface is applied two or more times to the skin sample, is found, *inter alia*, at page 18, lines 1 to 11. Support for claims directed to methods wherein the method further comprises recovering a cellular material sample from below the skin stratum corneum layer, is found, *inter alia*, at page 3, lines 23 to 26. Support for claims directed to methods wherein the adhesive used in the method comprises an adhesive tape, such as a duct tape, a Scotch™ tape or a D-SQUAME™ tape, is found, *inter alia*, at page 7, lines 22 to 25. Support for claims directed to methods wherein the biological factor or a nucleic acid encoding a biological factor isolated or identified by the method comprises an inflammatory mediator, a polynucleotide, a polypeptide or a lipid, is found, *inter alia*, at page 6, lines 3 to 12; page 8, lines 2 to 29. Support for claims directed to methods wherein the biological factor isolated or identified by the method comprises a polynucleotide such as a DNA, an RNA, e.g., an mRNA, is found, *inter alia*, at page 5, lines 24 to 27; page 6, line 10; page 8, lines 5 to 6; page 18, lines 12 to 28. Support for claims directed to methods wherein the nucleic acid encoding a biological factor, or, the biological factor, isolated or identified by the method, the factor comprising a polypeptide, such as a cytokine, e.g., IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12, IL-13, IL-14, granulocyte macrophage colony stimulating factor (GM-CSF), or interferon, is found, *inter alia*, at page 1, lines 9 to 11, page 6, lines 3 to 7 and page 6 line 30 to page 7, line 9; page 8, lines 2 to 3. Support for claims directed to methods wherein the biological factor isolated or identified by the method comprises an inflammatory mediator such as a leukotrienes or a prostaglandin, or a lipid such as a cholesterol or a fatty acid, is found, *inter alia*, at page 6, lines 8 to 12, page 21 and Table 3. Support for claims directed to methods further comprising quantifying the nucleic acid and/or biological factor in the skin sample, such as quantifying a polynucleotide, such as an mRNA, or a polypeptide, such as a cytokine, is found, *inter alia*, at page 3, lines 16 to 22; page 9, lines 18 to 30; page 14, lines 1 to 8 and 28 to 31. Support for claims directed to methods wherein the nucleic acid or the biological factor is associated with a local or systemic biological

reaction; and, wherein by isolating or detecting a biological factor in a recovered sample the presence of a local or systemic disease, a disorder, a genetic disease, or an inflammatory reaction is identified, distinguished, or diagnosed, is found, *inter alia*, at page 8, lines 8 to 11, and Example 3, pages 21 to 22. Support for claims directed to methods wherein the method further comprises applying the skin sample to a computer chip is found, *inter alia*, at page 4, lines 1 to 4.

### Supplementary Information Disclosure Statement

A supplementary information disclosure statement, FORM PTO 1449, and references cited therein are also submitted with this response. A first IDS was submitted February 22, 2000. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

### CONCLUSION

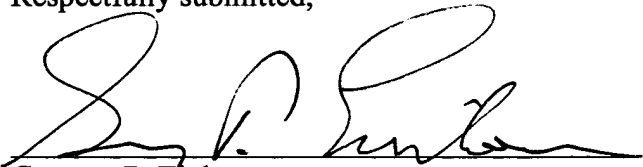
In view of the foregoing remarks and the instant amendment, Applicants believe all claims pending in this application (after entry of the instant amendment) are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (858) 678-5070.

Respectfully submitted,

Date:

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